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Varieties of Cereal and Oilseed Crops for Alberta – 1991

Prepared by the Cereal and Oilseed Advisory Committee of Alberta Agriculture

Explanatory

The information used in this publication is supplied by the University of Alberta, Agriculture Canada, Canadian Seed Growers Association, Canadian Seed Trade Association and Alberta Agriculture. This publication provides information on individual varieties and indicates cereal and oilseed production areas within the province. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, flax, canola, triticale, and rye. The Production areas, based primarily upon precipitation and length of growing season, are indicated on the map. With this information farmers can choose varieties that may be best suited to their own particular farming programs. The varieties are tested under medium management conditions and may change their response if tested under very high or very low management.

Yields

The tables show relative yields for six production areas. In area 1, irrigated yields expressed as a per cent of dryland yields are: C.W. Wheat 185, barley 160, oats 180, flax 210, canola 125. In area 2, irrigated yields expressed as a per cent of dryland yields are: C.W. wheat 130, barley 125, oats 120, flax 145, canola 120.

Maturity

The relative classifications refer specifically to the crop being considered. For example, an early-maturing wheat variety could require more days to reach maturity than a late-maturing variety of barley.
In areas 2, 3, and 5 of Alberta the following may be used as a guide for estimating maturity in actual days from seeding to harvest when the crops are seeded on fallow land: Neepawa wheat - 120 days, Park - 116, Grizzly oats - 114, Jasper - 106, Galt barley - 105, Harrington – 106, Otal - 94, McGregor flax - 130, Noralta - 117, Westar canola - 112, and Tobin - 95 days. In area 6 the longer daylight hours usually reduce the number of days to maturity required. Area 4 has the longest requirement in the province for days to maturity. In southern Alberta, Neepawa can be expected to mature in 100 to 105 days and other crops are similarly earlier maturing. The comparison among varieties within crops, however, tend to remain fairly uniform regardless of where the crops are grown.

Disease, seed treatment

- Seed of rye and flax should be treated to control seedling blight and seed of canola to control flea beetles, seedling blight and the seedborne phase of virulent blackleg.
- Cereal smuts can be controlled with systemic seed treatment fungicides. See Alberta Agriculture publication "Seed Treatment of Cereal and Oilseed Crops Agdex 100/632".
- Treated seed must not be fed to livestock or poultry of sold for feed. Refer to label for maximum period for storing treated seed. Storage periods for fungicide-insecticide combination products are fairly short. Small quantities of excess seed can be buried at regional landfills. Do not expose treated seed to wildlife!

Good seed

- In relation to total farm input expenses, the cost of GOOD SEED, a most important factor, is very small.
- The only way to be absolutely sure of obtaining a particular variety is by the use of PEDIGREED SEED.
- Pedigreed seed may be purchased in bulk from authorized suppliers.

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.

COMPARISON OF VARIETIES

WHEAT

Variety	Area (See map) Irr. 1&2	1	2	3	4	5	6	Relative Maturity	T. Wt.	K. Wt.	Resistance to: Ldg.	Shat.	Loose Smut	Bunt	Com. Rt. Rot
	Yield as % of Neepawa							**ELIGIBLE FOR C.W. RED WHEAT GRADES**							
Columbus	98	98	100	98	96	99	102	Med-late	76	36	G	G	I	R	I
Conway	99	97	100	97	99	100	100	Medium	76	33	G	G	I	I	I
Katepwa	100	98	100	94	97	94	94	Medium	76	33	G	G	R	R	I
Kenyon	100	98	102	96	97	98	97	Medium	76	32	G	G	I	R	I
Lancer	94	94	91	87	–	–	–	Med-late	76	34	P	G	R	R	I
Laura	103	103	106	99	103	105	107	Med-late	76	33	G	G	S	S	I
Leader	93	95	100	94	–	–	–	Med-late	76	32	G	G	I	R	S
Neepawa	100	100	100	100	100	100	100	Medium	76	33	G	G	R	I	I
Park	–	–	95	85	91	89	96	Early	77	33	F	G	R	I	I
Roblin	96	91	100	90	101	96	98	Med-early	76	35	G	G	R	S	I

REMARKS: LEADER & LANCER – recommended for sawfly areas only. COLUMBUS & LAURA – late maturing in Areas 3, 4, 5 and 6. NEEPAWA – difficult to thresh. PARK – subject to head discoloration with yield loss. C.W. Red Spring Wheat grown under irrigation tends to have lower grades. COLUMBUS & LEADER – have sprouting resistance. LAURA & ROBLIN – require a systemic fungicide seed treatment. MINTO, CDC MAKWA & PASQUA – insufficient data to describe, seed not available in 1991.

	Yield as % of Neepawa							**ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES**							
Biggar	120	119	141	114	120	–	–	V-late	77	37	G	G	S	S	S
Genesis	–	124	127	119	–	–	–	V-late	75	36	P	G	I	S	I
Oslo	102	95	106	96	114	110	94	Medium	74	36	Ex	G	S	I	S

REMARKS: BIGGAR (Hy368), GENESIS (Hy355) & OSLO – require a systemic fungicide seed treatment. OSLO – less drought tolerent than Biggar. BIGGAR and OSLO – red seeded semi-drawf varieties. GENESIS – white seeded standard height variety which may be subject to yield and quality reduction due to lodging, late maturity and sprouting susceptibility in high rainfall areas. Hy320 was deregistered in 1990.

	Yield as % of Neepawa							**ELIGIBLE FOR C.W. SOFT WHITE SPRING WHEAT GRADES**							
Fielder	119	–	–	–	–	–	–	Late	74	35	G	F	S	S	S

REMARKS: OWENS - will be deregistered in Feb. 1991. SWS-52 - received a one year interm registration renewable until 1993, insufficient data to describe. FIELDER - semi-dwarf variety which requires a systemic fungicide seed treatment.

	Yield as % of Wakooma							**ELIGIBLE FOR C.W. AMBER DURUM WHEAT GRADES**							
Kyle	102	108	99	107	–	–	–	Late	75	43	P	G	I	R	I
Medora	102	101	99	94	–	–	–	Med-late	77	43	G	G	I	R	I
Sceptre	104	102	110	98	–	–	–	Medium	76	41	G	G	I	R	I
Wakooma	100	100	100	100	–	–	–	Med-late	76	41	P	G	I	R	I

REMARKS: KYLE, MEDORA & WAKOOMA, – should be grown only in Area 1 and 2 and the southeastern portion of Area 3 because of late maturity. WAKOOMA yields about 9% more than Neepawa in areas of adaptation. SCEPTRE – Lowest incidence of kernel smudge. PLENTY – insufficient data to describe, no seed available in 1991.

	Yield as % of Norstar							**ELIGIBLE FOR ALBERTA RED WINTER WHEAT GRADES**							
Norstar	–	100	XX	XX	–	–	–	Early	79	30	P	G	S	S	S
Norwin	116	99	–	–	–	–	–	Early	80	30	F	F	S	S	S

REMARKS: Varieties listed with winter hardiest at the top. Winter survival is best in southwestern Alberta. NORWIN – has very short straw, sensitivity to mid-season drought; not recommended for light soils, dry fall conditions or where yields lower than 40 bu/ac (2.5 t/ha) are common. Winter wheats are susceptible to Russian wheat aphids .

OTHER CEREAL CROPS

SPRING RYE – GAZELLE – only available spring variety and has maturity similar to Neepawa wheat.
OTHER WHEATS – BLUESKY & WILDCAT – eligible for Utility Wheat Grades only, yield 5% – 10% above Neepawa, and maturity similar to Neepawa.
WINTER TRITICALE – PIKA, TRILLIUM & WINTRI – yield similar to Norstar. Pika is similar in winter survival to Norstar, but Trillium and Wintri are 5%-10% lower.

Symbols used: – Denotes variety not generally suited to area; XX Denotes no data available.

Abbreviations used: T. Wt. = Test weight (kg/hl); K. Wt. = Kernel weight (grams/1000 kernels); Ldg. = Lodging; Shat. = Shattering; Ex = Excellent, G = Good, F = Fair, P = Poor; Com. Rt. Rot = Common root rot; R = Resistant, I = Intermediate, S = Susceptible. Multiply kg/hl by 0.8 to get pounds per bushel.

BARLEY

Area (See Map)
Yield as % of Galt

Resistance to:

Variety	Irr. 1&2	1	2	3	4	5	6	Rel Mat	No. of Row	Awn Type	T. Wt.	K. Wt.	Ldg.	Shat.	Loose Smut	FL & Cov. Smut	Com. Root Rot	Scald	Net Blt.
ELIGIBLE FOR GENERAL PURPOSE GRADES ONLY																			
Abee	90	108	101	100	99	111	100	L	2	R	65	43	F	G	S	I	I	S	S
AC Stacey	–	–	–	–	93	101	97	E	6	R	61	34	F	F	S	I	S	R	I
Brier	107	114	113	103	107	131	119	L	6	S	60	38	F	F	S	R	S	R	I
Deuce	100	105	95	94	96	103	93	M	2	R	66	42	G	G	S	R	I	S	S
Galt	100	100	100	100	100	100	100	M	6	SS	60	37	G	F	S	R	S	I	S
Heartland	112	106	106	99	102	102	101	M	6	S	60	37	G	F	I	S	I	S	I
Jackson	–	–	–	–	91	92	94	E	6	R	62	38	G	F	S	S	I	S	S
Johnston	95	110	104	109	99	118	112	L	6	S	61	36	P	G	S	S	S	R	S
Leduc	108	108	107	103	101	110	99	M	6	R	60	41	F	G	I	R	S	R	I
Noble	111	113	107	103	106	109	106	M	6	S	59	38	G	F	S	I	S	I	S
Otal	–	–	–	–	82	87	86	E	6	R	62	34	P	P	S	I	S	S	S
Virden	107	113	110	101	105	115	106	L	6	S	59	43	G	G	S	I	I	S	I
SEMI-DWARF																			
Duke	109	104	106	100	106	109	100	L	6	R	61	38	Ex	F	S	I	I	R	S
Samson	103	96	100	92	102	97	97	L	6	R	59	36	Ex	G	S	I	I	S	S
Winchester	103	99	102	93	94	96	91	M	6	S	60	41	Ex	G	S	R	I	R	I
HULLESS																			
Condor	83	89	78	80	78	85	81	M	2	R	75	36	G	G	S	S	S	S	S
Tupper*	88	82	83	82	79	84	82	M	6	R	69	34	G	G	I	S	S	S	S
ELIGIBLE FOR MALTING GRADES																			
Argyle	94	95	95	98	100	99	94	M	6	S	60	35	G	F	I	S	I	I	S
Bonanza	93	97	97	97	95	96	91	M	6	S	60	36	G	F	I	S	I	I	S
B1602	101	95	96	90	98	106	92	M	6	R	64	37	G	F	S	S	I	S	S
Ellice*	96	97	96	95	96	106	101	M	2	R	64	42	G	F	I	S	S	S	S
Harrington	98	104	94	98	89	108	98	M	2	R	63	42	G	F	S	S	I	S	S
Klages	87	97	90	98	88	109	100	L	2	R	64	43	G	F	S	R	I	S	S

REMARKS: Smuts can be controlled with systemic seed treatment fungicides. Semi-Dwarfs respond to high levels of management and can yield up to 50% more than Galt. ARGYLE, OTAL & TUPPER show primarily head breakage while the other varieties show primarily kernel shattering. BRIDGE, BRIER,CDC BUCK, CDC RICHARD, DUEL & MANLEY – seed supply limited in 1991.

OATS

Area (See Map)
Yield as % of Cascade

Resistance to:

Variety	Irr. 1&2	1	2	3	4	5	6	Rel Mat	T. Wt.	K. Wt.	Ldg.	Shat.	Smuts
Athabasca	87	84	79	81	81	79	85	Early	49	36	Good	Fair	S
Calibre	99	106	98	98	94	96	93	Late	50	36	Fair	Good	S
Cascade	100	100	100	100	100	100	100	Med-late	48	36	Good	Good	S
Derby	101	111	101	108	102	101	96	Med-late	51	37	Good	Good	S
Foothill	87	94	85	93	82	88	85	Late	47	31	Good	Good	S
Grizzly	94	90	89	91	91	91	91	Late	49	36	Fair	Good	S
Harmon*	92	94	91	94	88	89	85	Med-late	48	34	Good	Good	R
Jasper	95	97	96	94	89	92	87	Early	50	35	Fair	Good	S
Riel*	98	95	92	96	84	90	91	Med-late	49	34	Good	Good	R
Robert	97	93	90	98	79	89	82	Med-late	47	39	Good	Good	R
Waldern	104	106	104	101	102	103	110	Med-late	46	44	Good	Good	S
HULLESS													
Terra*	80	72	71	74	74	74	72	Early	54	29	Good	Good	S
Tibor*	63	60	56	54	48	49	48	Med-late	55	31	Good	Good	R

REMARKS: RIEL, ROBERT, TIBOR & TERRA – seed supply limited in 1991. CALIBRE, DERBY, JASPER, RIEL & ROBERT – thin hull. JASPER – high protein. FOOTHILL – forage variety. RIEL & ROBERT – red (tan) kernels.

Symbols used: * Denotes variety may not be described in 1992; – Denotes variety not well suited to the area.
Abbreviations used: Rel Mat = Relative maturity; L=Late, M=Medium, E=Early; R=Rough, SS= Semi-Smooth, S=Smooth; T. Wt. = Test Weight (kg/hl); K. Wt. =Kernel weight(g/1000 kernels); Ex = Excellent, G=Good, F=Fair, P=Poor Ldg.=Lodging; Shat.= Shattering & Neck Break; FL & Cov. Smut =False Loose & Covered Smut; Com. Root Rot = Common Root Rot; Net Blt. = Net Blotch. Multiply kg/hl by 0.8 to get pounds per bushel.

SPRING TRITICALE

Variety	Area (See Map) Yield as % of Wapati Irr. 1&2	1	2	3	4	5	6	T. Wt.	K. Wt.	Rel Mat	Resistance to: Lodging	Shat-tering	Loose Smut	Bunt	Common Root Rot
Carman*	90	92	85	85	82	–	–	59	42	V.late	Good	Good	R	R	S
Frank	92	101	103	92	86	–	–	65	37	V.late	Good	Good	R	R	S
Wapiti	100	100	100	100	100	–	–	64	43	V.late	Good	Good	R	R	I

REMARKS: CARMAN, FRANK & WAPITI – late maturing and should not be grown for seed production in areas 5 and 6. WAPITI – Average yield is 28% greater than Neepawa. Multiply kg/hl by 0.8 to get pounds per bushel.

FALL RYE

Variety	Area (See Map) Yield as % of Kodiak Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Test Weight	Straw Strength	Stem Smut
Musketeer	–	122	102	XX	106	103	XX	Early	Good	Good	R
Cougar	–	98	XX	XX	90	98	99	Late	Good	Good	S
Prima	–	125	102	XX	103	107	XX	Late	Good	Fair	I
Kodiak	–	100	100	XX	100	100	100	Late	Poor	Fair	I

REMARKS: COUGAR - has shortest straw, susceptible to seedling blight – use of treated seed can improve yields. Stem smut – Use systemic fungicides in high risk areas on all varieties. Varieties listed with the winter hardiess at the top. Yield information is based on limited data.

CANOLA

Variety	Area (See Map) Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Straw Strength
					Yield as % of Tobin				**POLISH TYPE** *B. campestris*
AC Parkland	99	XX	100	100	90	104	96	Early	Fair
Colt	101	XX	108	118	106	110	107	Early	Fair
Eclipse	95	XX	XX	92	XX	91	95	Early	Fair
Horizon	104	XX	105	114	104	111	114	Early	Fair
Tobin	100	100	100	100	100	100	100	Early	Fair
					Yield as % of Westar				**ARGENTINE TYPE** *B. napus*
AC Excel	XX	XX	XX	102	XX	XX	XX	Med-late	Good
Alto	99	XX	106	103	116	99	102	Med-late	Fair
Bounty	XX	XX	XX	107	XX	XX	XX	Med-late	Good
Celebra	102	XX	XX	111	120	XX	XX	Med-late	V.Good
Delta	101	XX	105	112	114	107	100	Med-late	V.Good
Global	101	–	–	–	–	–	–	Late	V.Good
Hyola 40	101	XX	106	110	130	111	100	Med-late	Good
Legend	96	XX	105	107	105	101	104	Med-late	Fair
Pivot*	94	–	–	–	–	–	–	Late	Good
Profit	95	XX	99	100	103	99	77	Med-late	Good
Stallion	84	XX	XX	81	96	XX	XX	Med-late	Fair
Tribute*	64	45	71	65	76	69	63	Med-late	Good
Vanguard	98	XX	106	105	110	100	86	Med-late	Good
Westar	100	100	100	100	100	100	100	Med-late	Fair
Tobin	**74**	**88**	**84**	**69**	**91**	**64**	**76**	**Early**	**Fair** *B. campestris* variety for comparison purposes

REMARKS: COLT & HORIZON – Susceptible to staghead. Polish type 2-3 weeks earlier than Argentine type. Argentine types shatter more readily than Polish when ripe, require early seeding in Areas 4, 5 & 6. Argentine canola is risky in Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. TRIBUTE, STALLION & AC TRISTAR – Triazaine resistant varieties. TRIBUTE & STALLION have low quality. AC TRISTAR – insufficient data to describe. ECLIPSE & AC EXCEL – no seed available in 1991. **To help prevent the spread of virulent blackleg to your farm, only use certified blackleg free and treated seed, in a minimum 4-year rotation.** *B. campestris* will be renamed *B. rapa* in 1991.

Symbols used: *Denotes variety may not be described in 1992; – Denotes variety not well suited to the area; XX Denotes no data available. Abbreviations used: T. Wt. = Test Weight (kg/hl); K. Wt. =Kernel weight(g/1000 kernels); R = Resistant, I = Intermediate. S = Susceptible

FLAX

Variety	Area (See Map) Yield as % of Noralta							Relative Maturity	Seed Size	Rust Resistance
	Irr 1&2	1	2	3	4	5	6			
Andro	99	109	106	XX	103	XX	97	Medium	Medium	R
Dufferin	94	92	81	76	93	–	–	Late	Medium	R
MacGregor	112	107	106	110	105	–	–	Late	Small	R
Noralta	100	100	100	100	100	100	100	Early	Small	S
NorLin	110	97	105	89	110	97	104	Medium	Medium	R
NorMan	95	96	95	96	105	93	90	Medium	Medium	R
Vimy	99	106	102	84	104	–	–	Med-Late	Large	R

REMARKS: SOMME & FLANDERS– Insufficient data to describe, limited seed available in 1991.

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